







Technical Assistance Financing Facility for Disaster Prevention and Preparedness

Component 1: Country-specific technical assistance







Review of the state of the art of national disaster loss databases

Overview

Grant Size	€250,000
Duration	July 2025 – October 2026
Key hazard(s)	Multi-hazard; Large-scale disasters
Key word(s)	Disaster loss database; DRM and Artificial intelligence; Standardisation of disaster data; Legal and institutional frameworks of risk data; Risk-informed and evidence-based decision-making

Context

Sweden, like many European countries, faces a growing array of natural hazards, including floods, storms, wildfires, landslides, and climate-related events, as well as their potential cascading effects. Recent disasters such as Storm Hans and the Stenungsund Landslide in 2023 have underscored the urgent need for robust systems to record, analyse, and share disaster loss data to inform preparedness and response measures. In line with the European Union (EU) Preparedness Union Strategy and the Sendai Framework for Disaster Risk Reduction (SFDRR), Sweden is seeking to modernise its disaster data management by developing a national disaster loss database. Disaster damage and loss databases are a critical component of scientific knowledge on disaster impacts, supporting the identification of urgent and cost-effective resilience investments. These databases, which can include both historical and forward-looking data, are essential for assessing the geographic extent of events, calibrating hazard maps and early warnings, and conducting costbenefit analyses of damages to lives, property, economic activity, social equity, health, the environment, and cultural heritage. They also enable continuous monitoring of progress in climate adaptation and disaster risk reduction, with novel technologies such as Al and machine learning enhancing their effectiveness. Within broader disaster risk management frameworks like the SFDRR, such databases are directly relevant for EU policies and directives, including national risk assessments and the Floods and Seveso Directives.

The Swedish Civil Contingencies Agency (MSB) is responsible for strengthening Sweden's ability to prevent and manage major accidents and crises, safeguarding lives, social functions, and core societal values. The MSB, as the key agency for civil protection and emergency management, has systematically collected data from municipal emergency services for over 30 years and manages more data on extensive technological and natural events, supporting Sweden's compliance with both national and EU requirements. As needs and technological solutions evolve continuously, the MSB is looking to review the state of the art in damage and loss data management.

Objective

The objective of this project is to provide technical assistance to MSB with respect to the development of a national disaster loss database. This is achieved by (1) reviewing current good practice on establishing and maintaining disaster damage and loss data systems across EU member states (MS) and beyond for natural hazards and other largescale disasters, and (2) providing recommendations of relevance for Sweden.

Key Activities and Expected Results

The Activity is structured around two parts. First, it entails a review of international best practices in establishing and operating disaster damage and loss databases, with a focus on efficient reporting, integration of climate change considerations, and the use of innovative data management approaches. Second, it also involves an assessment of Sweden's existing disaster damage and loss data collection systems, led by MSB, and the identification of technical options for improvement based on insights from the first component. The Activity also includes consultations and knowledge-sharing activities, with opportunities for participation from other countries through workshops to facilitate the exchange of experience and good practices.

In terms of expected results, the Activity provides MSB and relevant Swedish authorities with actionable recommendations to strengthen disaster loss data infrastructure and modernise existing systems. The findings support Sweden's ability to meet EU and international reporting requirements, enhance risk management and preparedness, and foster collaboration and knowledge exchange both within Sweden and with international partners. Findings will be relevant to other countries looking to strengthen their disaster damage and loss data systems. Ultimately, the Activity contributes to improved disaster resilience in Sweden and benefits the broader EU community.

Sustainability and Coordination

The findings and outputs of the project will be disseminated among stakeholders in Sweden and shared more broadly, deepening the national knowledge base on DRM. This study is closely aligned with national needs to improve the damage and loss database. By focusing on good practices and forward-looking recommendations, and through planned dissemination and exchange activities, the study is expected to inform future efforts in Sweden and potentially serve as a model for other countries in the EU and beyond. The project also fosters opportunities for collaboration with other countries engaged in building and managing comprehensive disaster loss databases. From a technical perspective, the study adopts a forward-looking approach that considers future needs related to climate change, modern data collection, and advanced analysis. The results contribute to broader objectives such as contingency planning, climate change adaptation, the green transition, and the improved use of data and innovative analytical tools for DRM. These efforts ensure that the benefits of the project endure beyond its completion, supporting the institutionalisation of DRR and the effective use of disaster risk information for emergency preparedness and response.

Given the alignment with EU and global standards, the approaches, good practices, and lessons learned through this project are also relevant to other countries participating in the Union Civil Protection Mechanism (UCPM) and the broader international community. Documented experiences and knowledge products from Sweden can inform similar efforts to strengthen institutional frameworks and coordination in neighbouring countries and across the UCPM network. In this way, the project's outputs contribute to the global knowledge base on disaster risk management and foster improved coordination and resilience, supporting the European Union's Preparedness Strategy and advancing regional and international cooperation on disaster and climate resilience.

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